UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,489	12/22/2000	Torsten Teich	DE919990076	8948

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EXAMINER
JACK, TODD M

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated

by Schuyler.

Claim 1: Schuyler (5,832,526) teaches file recovery techniques for recovering all of

each file's data (col. 4, lines 39-42) where the process of recovery is equivalent to that

of a data restoration which may very well be during a write operation, pre-allocated

storage sub-areas of a random access storage device with an end-of-file tagging code

(col. 4, lines 55-65) where the end-of-file tagging code is a position status byte, and a

file to have all of its data recorded in logically sequential order across storage sub-areas

(col. 7, lines 56-60) where the data recording is equivalent to a write operation and a

logical storage method is to store the entire data set in a like manner.

Claim 2: Further, Schuyler teaches a sequence of allocation blocks or fragments that

store the file's data (col. 4, lines 4-35) and recording user comments about the file (col.

4, lines 34-35).

Claim 3: Further, Schuyler teaches that random access devices store executable code, which may be lost when power is lost and will require updating by a non-volatile random access memory device such as flash EEPROM (col. 7, lines 5-15). Thus, the code or data is stored in an EEPROM before a function (i.e. write) is performed in case a power failure occurs, then if a power failure does occur the data files are updated by the EEPROM storage.

Claim 4: Further, Schuyler teaches that before power loss an indicator designates the sequence of allocation blocks or fragments that store the file's data (col. 4, lines 1-7).

Claim 5: Further, Schuyler teaches that before power loss an indicator designates the sequence of allocation blocks or fragments that store the file's data (col. 4, lines 1-7).

Claim 6: Further, Schuyler teaches the algorithm may additionally or alternatively record the next sub-area as being the probable first sub-area of a next file or file fragment or the beginning of free space or a free space fragment (col. 16, lines 67 and col. 17, lines 1-3).

Claim 7: Further, Schuyler teaches a tag format version number where validated information is gathered (col. 17, lines 7-20).

Claim 8: Schuyler teaches EEPROM may be used in carrying out nonvolatile data storing functions (col. 7, lines 40-55), data is recorded with down-pointing arrow-headed lines to indicate that directory structure points the way to portions of the internal files (col. 7, lines 50-55), data recorded in logically successive storage sub-areas where the second storage area is immediately adjacent to the first storage area (col. 7, lines 61-67), and unique header blocks (or unique templates) and thereby identifies the locations where each application begins (col. 4, lines 56-65).

Claim 20: Schuyler teaches EEPROM may be used in carrying out nonvolatile data storing functions (col. 7, lines 40-55), an EEPROM may carry out the nonvolatile data storing functions where data is recorded on the disk subsystem to define a directory structure and a plurality of files (col. 7, lines 47-49), and a file is shown to have all of its data recorded in across successive storage sub-areas of a storage area (col. 7, lines 40-49).

Claim 21: Further, Schuyler teaches Schuyler teaches that random access devices store executable code, which may be lost when power is lost and will require updating by a non-volatile random access memory device such as flash EEPROM (col. 7, lines 5-15).

Claim 22: Further, Schuyler teaches that random access devices store executable

code, which may be lost when power is lost and will require updating by a non-volatile

random access memory device such as flash EEPROM (col. 7, lines 5-15).

Claim 23: Further, Schuyler teaches that random access devices store executable

code, which may be lost when power is lost and will require updating by a non-volatile

random access memory device such as flash EEPROM (col. 7, lines 5-15).

Claim 24: Further, Schuyler teaches that random access devices store executable

code, which may be lost when power is lost and will require updating by a non-volatile

random access memory device such as flash EEPROM (col. 7, lines 5-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 9-11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schuyler in view of Steiner (6,003,134).

Claim 9: Further, Schuyler fails to teach two or more data files are affected by the write

operation, and wherein new or modified data is written into the files in a cyclic manner,

wherein each file comprises an indication of the number of records contained in the file

and a plurality of records, and wherein each record comprises an indication of the status

of the data in the record, a synchronization number synchronizing with records of other

files, and the data. Steiner teaches data is recorded on the disk subsystem to define a

directory structure and a plurality of files. Down-pointing arrow-headed lines are drawn

to indicate that directory structure points the way to the start and subsequent portions of

the internal files (col. 7, lines 49-54).

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to modify the method by Schuyler by including cyclic

writing with the application of an indicator for each file. This modification would have

been obvious because a person having ordinary skill in the art would have been

motivated to do so, as suggested by Steiner, in order to be able to locate a file at a later

time.

Claim 10: Further, Schuyler teaches identifying the physical start of each stored file,

associating each file with a corresponding file_name (col. 4, lines 1-4), specifying a

graphical icon where the graphical icon represents the file (col. 4, lines 21-26) and

specifying an application program to be associated with the file, such as the application

program that created or last modified the file (col. 4, lines 29-31). Schuyler fails to

teach copying the data stored in the current active record into the working record and

adding to or modifying the data according to the write operation in the working record,

changing the status of the working record of the file to active; repeating the steps for

each further file and changing the record status of the original current active record of

the first file to inactive as an indication that the write operation is complete. Steiner

teaches when the journal or log file approaches its maximum size, any new data placed

in the file will overwrite the oldest data in the file—if sufficient space is allocated, many

systems are capable of storing sufficient data to achieve the purpose of the log file (col.

1, lines 50-60), the storage sessions where pieces of the file of interest are located have

been identified- the next step is to retrieve the various portions of the file from the

various archive storage sessions and coalesce the most recent versions of all pieces of

the file (col. 3, lines 19-41), and indicate that the previous versions of the file have been

superceded by invalidating the previous written data which indicates to the system that

the version has been superceded (col. 3, lines 51-61).

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to modify the method by Schuyler by including

copying the data stored and changing the status of files. This modification would have

been obvious because a person having ordinary skill in the art would have been

motivated to do so, as suggested by Steiner, in order to adapt the files to changing data

states.

Claim 11: Further, Schuyler fails to teach the step of determining the current active

record and the working record of the files comprises searching for the first record in the

file whose status byte indicates active status and setting this record as said current

active record, and setting the subsequent record as the working record. Steiner

teaches the storage sessions where pieces of the file of interest are located have been

identified- the next step is to retrieve the various portions of the file from the various

archive storage sessions and coalesce the most recent versions of all pieces of the file

(col. 3, lines 19-41), and indicate that the previous versions of the file have been

superceded by invalidating the previous written data which indicates to the system that

the version has been superceded (col. 3, lines 51-61).

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to modify the method by Schuyler by determining

the current active and working record of the files. This modification would have been

obvious because a person having ordinary skill in the art would have been motivated to

do so, as suggested by Steiner, in order to adapt the files to changing data states.

Claim 25: Further, Schuyler fails to teach a computer programme stored on a data

carrier medium. Steiner teaches a computer readable media having executable

instructions or data fields stored (col. 5, lines 18-29).

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to modify the method by Schuyler by including a

computer programme. This modification would have been obvious because a person

having ordinary skill in the art would have been motivated to do so, as suggested by

Steiner, in order to have access to an operating tool.

Claim 12-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Schuyler in view of Steiner, further in view of Kuo et al. (6,003,134).

Claim 12: Further, Schuyler teaches additional information is stored in a structure,

which is used to tie together the fragmented portions of each file (col. 3, lines 24-36), a

unique tagging code is recorded in each file (col. 9, lines 65-67) possibly with an end-of-

file tagging code (TAG) (col. 10, lines 1-4) with an active status indicator being an

option, the recorded unique tagging code or codes of slack areas and may be used

during file recovery operations to create end of file pointers (col. 10, lines 12-15),

application programs place unique header blocks at the beginning of their generated

data files (col. 4, lines 56-65), routinely making secondary modifications to the mirror

directory structure each time primary modifications are made to the primary directory

structure (col. 10, lines 47-52), and a unique tagging code is recorded in each file (col.

9, lines 65-67) possibly with an end-of-file tagging code (TAG) (col. 10, lines 1-4) with

an active status indicator being an option. Schuyler fails to teach identifying a current

active record and a working record of a second file and copying the data from the

current active record to the working record, setting synchronization indicator pointers to

indicate the link between this file and the first file and changing the synchronization

indicator pointer of the first file to indicate its link with the second file, repeating these

steps for the second file for any subsequent files, and identifying the current active

record of the file and a working record and copying the data to be added to or modified

from the current active record to the working record. Steiner teaches a file has various

modified portions are written to archive storage session where archive storage session

would then include file updates (col. 7, lines 55-60), the storage sessions where pieces

of the file of interest are located have been identified- the next step is to retrieve the

various portions of the file from the various archive storage sessions and coalesce the

most recent versions of all pieces of the file (col. 3, lines 19-41), and indicate that the

previous versions of the file have been superceded by invalidating the previous written

data which indicates to the system that the version has been superseded (col. 3, lines

51-61). Kuo et al. teaches storing signature-type information that may be stored with a

file and identifying which copies of a file are current (col. 12, lines 31-46).

Therefore, it would have been obvious to a person having ordinary skill in the art

at the time the invention was made to modify the method by Schuyler by obtaining

access to records and copying them and modifying the active record. This modification

would have been obvious because a person having ordinary skill in the art would have

been motivated to do so, as suggested by Steiner, in order to convert files to a working

status and identify the files.

Claim 13: Further, Schuyler fails to teach an interruption of the write operation at any

stage, either all current active records of all files affected by the operation are set as

fully active records, and the data contained in the files prior to the start of the write

operation is the current active data, or all working records of all files are set to a fully

active status, in which case all files contain the modified data due to the write operation

as the active data. Steiner teaches at a later time a file had various modified portions,

the archive storage session is initiated and modified portions of file are written to archive

storage session which include file updates and are associated with an index (col. 7,

lines 55-67) that may designate active status.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method by Schuyler by recovering from a write interruption. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Steiner, in order to assure that data is not lost upon a malfunction of the writing apparatus.

Claim 14: Further, Schuyler teaches a variety of events may occur during the operational life of a disk that work to undesirability damage different parts of the disk and/or destroy data that is stored in those parts (col. 3, lines 62-67) and the files are associated with a corresponding file_name (col. 4, lines 3-4).

Claim 15: Further, Schuyler teaches a variety of events may occur during the operational life of a disk that work to undesirability damage different parts of the disk and/or destroy data that is stored in those parts (col. 3, lines 62-67) and the files are associated with a corresponding file_name (col. 4, lines 3-4).

Claim 16: Further, Schuyler teaches a variety of events may occur during the operational life of a disk that work to undesirability damage different parts of the disk and/or destroy data that is stored in those parts (col. 3, lines 62-67) and the files are associated with a corresponding file_name (col. 4, lines 3-4).

Claim 17: Further, Schuyler teaches a variety of events may occur during the operational life of a disk that work to undesirability damage different parts of the disk and/or destroy data that is stored in those parts (col. 3, lines 62-67) and the files are associated with a corresponding file_name (col. 4, lines 3-4).

Claim 18: Further, Schuyler teaches a variety of events may occur during the operational life of a disk that work to undesirability damage different parts of the disk and/or destroy data that is stored in those parts (col. 3, lines 62-67) and the files are associated with a corresponding file_name (col. 4, lines 3-4).

Claim 19: Further, Schuyler teaches a section consists of a succession of storage sub-areas (col. 9, lines 6-8) where pointers point to the allocated block of a fragment (col. 9, lines 46-58) and a file is defined by a file size header (col. 9, lines 40-45).
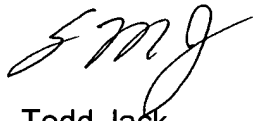
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd M Jack whose telephone number is 703-305-1027. The examiner can normally be reached on M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady, can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
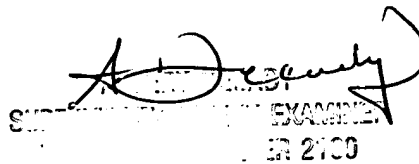
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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Todd Jack
Art Unit 2133

October 7, 2004